REMARKS

Status of the Application

Applicant respectfully requests reconsideration of the position set forth in the outstanding Office Action mailed March 4, 2003. Claims 1-6 are pending in the application. Per the Office Action mailed March 4, 2003, claims 1-6 stand as rejected under 35 U.S.C. §102, or in the alternative, under 35 U.S.C. §103.

Objections By The Examiner

The Examiner has objected to Applicant's amendment of February 19, 2003 under 35 U.S.C. §132, asserting that new matter has been introduced into the disclosure, in that the limitation of the surface treatment agent spraying directly and only to the surface of the drum; and the limitation of the paper strip being not stained by the release agent are not supported by the original disclosure. Specifically, the Examiner cites:

1.) Amended claim 1, line 7, recites "and wherein the paper strip is not stained by the release agent".

2.) Amended claim 1, line 4, recites "directly" and "only".

3.) Amended claim 4, line 14, recites "wherein the paper strip is not stained by the oil".

4.) Amended claim 4, line 4, recites "directly" and "only".

Applicant responds that amended claims 1 and 4 do not contain new matter, and therefore, such amendments should be entered and considered by the Examiner.

Support for the term "directly" is found in the specification on page 14, line 27 through page 16 as well as Figures 2, 4, 5 and 6. Figure 2 illustrates several drum driers (C1), the path of the paper strip through a dry portion of the paper machine, and the

path of the canvas (C2, C3) for pressing the paper strip against the drier surface. As set forth in the specification on page 16, paragraph 2, the object of the present invention is obtained by spraying the surface treatment agent onto the surface of the drum drier (C1), facing the paper strip, which is referenced in Figure 2 as the sites denoted by X and Y. Figures 4-6 are schematic illustrations showing the various states in which the surface treatment agent is sprayed. As is clearly shown in these Figures and described by the specification on pages 14, 15, and 16; the surface treatment agent is sprayed directly to the surface of the drum drier and the agent is not sprayed anywhere in the vicinity of the paper strip, specifically to avoid the problems associated with its contamination. Thus, the amendment of the term "directly" into claims 1 and 4 does not constitute new matter.

Applicants hereby make no admission as to the term "only" being new matter, instead Applicants believe the present invention is clearly and properly set forth as amended herein.

Support for the phrase "wherein the paper strip is not stained by the oil" is found on page 7, lines 21-25, where the specification sets forth that "...if the supply rate exceeds 500 mg/m^2 per min, dripping of the surface treatment agent containing the oil occurs, causing oil stains on paper to emerge, and resulting in contamination of peripheral equipment." Additionally, support is realized in view of the Examples, particularly those for Embodiments 1, 2 and 3 in relation to Comparative Example 3, line 26-31. Comparative Example 3 specifically states the observation of oil stains on the paper strip when the oil supply rate was 630 mg/m^2 per minute, however, in the Embodiment 1, 2 and 3 Examples there is no mention of the appearance of any oil stains on the paper strip. It is clear by the observation made in Comparative Example 3 that oil stains were being checked and recorded, and therefore, the lack of any such observation for the Embodiment 1, 2 and 3 Examples of the present invention provides the necessary evidence that no oil stains were found on the paper strip. Thus, amending claims 1 and 4 to include the language "wherein the paper strip is not stained by the oil" does not constitute new matter.

Rejections under 35 U.S.C. §102/103

Claims 1-6 stand as rejected under 35 U.S.C. §102(b) as being anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over U.S. Patent 3,014,832 (Donnelly).

Applicant responds that the Examiner is incorrect in his assertion that "[s]oiling or contamination of the web, however, is not a concern of the present invention as originally disclosed." Clearly the present invention deals with the prevention of contamination of the surface of a drum drier, yet the quality of the paper web is also an issue. The quality of the paper produced by the paper machine is at least partially dependent upon the condition of the surface of the drum drier, in that, if the surface of the drum drier is able to prevent wet paper from sticking to it, it aids in preventing "picking" and paper breaks as cited in the present specification on page 2, numbers 4 (lines 26-27) and 6 (lines 30-31). This fact, in combination with the statement set forth above with respect to the oil stains on the paper strip in Comparative Example 3, indicates that the present invention is intended to prevent contamination of the drum drier surface while not decreasing the quality of the paper produced due to oil stains. Therefore, it is clear that the present invention is also concerned with the prevention of soiling or contamination of the web.

Still further, the Examiner asserts that "[t]ransferring oil from the dryer drum to the paper is no different from spraying some of the emulsified oil onto the web" citing page 5, lines 23-24 of the present specification. Applicant strongly disagrees with the Examiner's assertion because a critical difference between the present invention and the subject matter described in Donnelly is the point of application of the surface treatment agent. Secondarily transferring a small amount of surface treatment agent from the surface of the drum drier to the paper strip as in the present invention is very different than direct application of a release agent to the web as in Donnelly.

Donnelly discloses the use of a release agent only in conjunction with the web, because the web adheres to the drying cylinder with some degree of adhesion, and hence, the release agent is applied to the web to control or reduce its level of adhesion. In fact, in column 6, lines 34-49, Donnelly describes the application of the release agent,

wherein it states "[t]he pressure applied at the nip by the press roll 19 spreads and distributes the release agent evenly in the web. It is an important part of the [Donnelly] invention that the release agent be uniformly distributed in the web so that it is present uniformly on the surface of the web as well." (Emphasis added). Moreover, Donnelly discloses the purpose of applying the release agent to the web, in column 7, lines 7-14, where the release agent lubricates the fiber structure of the formed tissue web, so that the fibers slide over one another more easily, or are partially plasticized so that the web can be stretched to a greater extent without rupturing, wherein the release agent changes the properties of the web, and the fibers of the web are partially plasticized. Therefore, Donnelly explicitly indicates that the application of the release agent directly to the surface of the web and its migration into the web are key features to the invention, as claimed in both claims 1 and 2. Donnelly, at no point, indicates that the release agent should be directly applied to the drum drier surface. The application of any release agent to the drier surface in Donnelly, as was previously noted, is simply incidental, and application directly to the drier surface or into the nip is neither taught nor suggested by Donnelly. Moreover, in claims 1 and 2, Donnelly explicitly states that a specific step in its process is "applying to the formed tissue web before drying a fluid containing a release agent. " Therefore, according to Donnelly's claims, the release agent must be applied to the tissue web.

In direct contrast to Donnelly, the present invention eliminates and teaches away from such a step because the present invention desires to maintain the quality of the paper and avoid its contamination, as noted above. In the present invention the emulsified oil is neither sprayed onto the paper or web nor onto the nip where it would influence the paper or web. In accordance with the present invention, the surface treatment agent should not be directly sprayed onto the paper strip. If the surface treatment agent is directly sprayed onto the paper strip, oil staining is produced on the paper, which causes the deterioration of the paper strip. According to the method described by Donnelly shown in Figure 2, the surface treatment agent is certainly sprayed onto the paper strip, resulting in the production of oil stains causing the deterioration of the paper strip.

The present invention utilizes a surface treatment prepared by emulsifying oil by the agency of a surfactant that is continuously supplied to the surface of the drum drier, and thus the present invention does not apply any of the emulsifying oil to the paper strip. The release agent is applied directly to the drier surface, an important aspect of the present invention that is set forth in both amended claims 1 and 4. Therefore, since the oil is not directly applied to the paper, the paper does not become contaminated. Moreover, since a very small amount of oil is used for application to the drum drier surface, if any oil applied to a surface of the drum drier were secondarily transferred to the paper strip, its slight amount would not contaminate the paper strip.

Thus, Donnelly teaches a significantly different process and teaches away from the present invention. Therefore, one skilled in the art would not find any teaching or suggestion in Donnelly that would result in the present invention.

In addition, Applicant responds that claims 5 and 6 depend from a claim that Applicant believes to be patentable, and therefore, claims 5 and 6 would likewise be patentable.

Applicant believes that the cited reference neither anticipates the Applicant's claimed invention under 35 U.S.C. §102(b) nor renders the present invention obvious under 35 U.S.C. §103(a). It is respectfully requested that these rejections be withdrawn.

SUMMARY

In view of the foregoing amendments and remarks, Applicant believes the stated grounds of rejection have been properly traversed, accommodated, or rendered moot and that a complete response has been made to the Non-Final Office Action mailed March 4, 2003. Applicant believes that the application stands in condition for allowance with withdrawal of all grounds of rejection. A Notice of Allowance is respectfully solicited. If the Examiner has questions regarding the application or the contents of this response, the Examiner is invited to contact the undersigned at the number provided below.

The fee for a two-month extension of the period for reply is due in accordance with this response, however should a fee be due that is unaccounted for, please charge

such fee to Deposit Account No. 501447 (Potter Anderson and Corroon). Furthermore, if any extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. §1.136(a), and any fees required therefore are hereby authorized to be charged to our Deposit Account No. 501447.

Respectfully submitted,

By _____

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